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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,043

06/24/2005

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535 7590 09/12/2008

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EXAMINER

MERLINO, AMANDA H

ART UNIT

PAPER NUMBER

2877

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/541,043	Applicant(s) CESARE, STEFANO	
	Examiner AMANDA H. MERLINO	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

Claim 1 objected to because of the following informalities:

- a) on line 5-6 of claim 1, "the Faraday" should read "a Faraday";
- b) on line 8 of claim 1, "a Faraday" should read "said Faraday";
- c) on lines 12, 15, 20, 22 and 23 of claim 1, the terms "optical system or telescope", "optical system" and "telescope" are used interchangeably. Applicant is requested to keep the terminology consistent to eliminate any confusion in the claim language.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 rejected under 35 U.S.C. 102(b) as being anticipated by Shiina et al (Optical Circulator for an in-line type compact lidar).

With claim 1, Shiina et al teach of an apparatus for the optical separation of the emission and reception light paths of a monostatic LIDAR in accordance with figures 1-3, said apparatus comprising a laser head emitting a beam of laser incident beam with linear polarization, a first polarizing beam splitter (PBS-1) oriented to transmit towards the Faraday rotator (FR) substantially all the light emitted by said laser head, the Faraday

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rotator (FR) applying a 45° polarization plane rotation, a second polarizing beam splitter (PBS-2), rotated through an angle of 45°. with respect to said first polarizing beam splitter (PBS-1), around the light propagation direction, telescope, for the transmission and-

reception of the light to/from the atmosphere; two detectors (Detector 1 and Detector 2), with related electronics, .collecting the backscattered light collected by said telescope and routed towards them by the two polarizing beam splitters (PBS-1) and (PBS-2); characterized in that substantially all the light emitted by said laser head is routed by the two polarizing beam splitters (PBS-1) and (PBS-2) and by the Faraday rotator (FR) towards the telescope and not in other directions, and substantially all the backscattered light collected by the telescope is routed by the two polarizing beam splitters (PBS-1) and (PBS-2) and by the Faraday rotator (FR) towards-the detectors (Detector 1 and Detector 2), and not in other directions.

With regard to claim 2, the apparatus is only made by solid-state elements.

With regard to claim 3, the light send in the atmosphere is linearly polarized (see figure 2a) and the laser head is isolated form the light back scattered by any element placed after said apparatus (page 3901, col 2, lines 7-10).

With regard of claim 4, Shinna et al teaches the steps of sending in the atmosphere in a light having a linear polarization (figure 2a) and maximizing the detection of the backscattered light maintaining the same linear polarization as the emitted light after the back reflection by the atmosphere (figure 2a and 2b).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda H Merlino whose telephone number is 571-272-2421. The examiner can normally be reached on Monday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J Toatley, Jr. can be reached on 571-272-2800 ext 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Amanda H Merlino /A. H. M./
Patent Examiner
Art Unit 2877
September 8, 2008

/Gregory J. Toatley, Jr./
Supervisory Patent Examiner, Art Unit 2877
10 Sept 2008